

**MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
MAINTENANCE OF WAY DIVISION
TRACK MATERIAL SPECIFICATION**

132RE Restraining Rail Joint Bar Set with D" Bar

MATERIALS

Each Set to included:

1 – 24" long heavy reinforcing "D" bar to be used in conjunction with standard AREMA, 4 hole, Quenched Carbon steel Joint Bar for new 132# RE section steel rails with a milled base. "D" bar material to meet ASTM A36 Specifications. Bar to be manufactured in accordance with dimensions shown on MBTA, M.O.W. Division Drawing number 330.

1 – 24" toeless, head free bar for 132 lb rail section, track bolts, nuts and washers in quantity as dictated by the specified joint bar length (4 sets). All material and processes shall be in accordance with the current AREMA manual for Railway Engineering, Chapter 4, Part 2 – Specifications for Quenched Carbon Steel Joint Bars. **EXCEPT toeless standard bar will include 4 oval hole and no round holes.**

Track bolts and nuts material and manufacture shall be in accordance with the current AREMA Manual, Chapter 4, Part 2 – Specifications for Heat-Treated Carbon Steel Track Bolts and Carbon Steel Nuts.

DESIGN

This document is for the procurement of 24' long, 1" thick, heavy reinforcing "D" bar, steel 132 RE joint bar, bolts, nuts, lock washers. Shims, steel 115RE rail and 132RE rails are shown for informational purposes only.

INSPECTION

The bidder shall be responsible for engaging the services of a qualified, independent inspection agency, approved by the Authority, for in-plant inspection of the material specified herein. Services shall include visual inspection and physical measurements of the material, as well as review of the plant records to insure compliance with the plans and specifications. All costs incidental to the inspection services shall be included as part of the bid proposal. Inspection and laboratory reports are to be forwarded to the individual named below for review prior to scheduling the materials for shipment.

SUBMITTALS

Prior to fabrication, the fabricator shall submit detailed shop drawings of the restraining rail joint bar to the authority for approval. Submit to:

MBTA Maintenance Of Way
21 Arlington Ave - Building 2
Charlestown, MA 02129

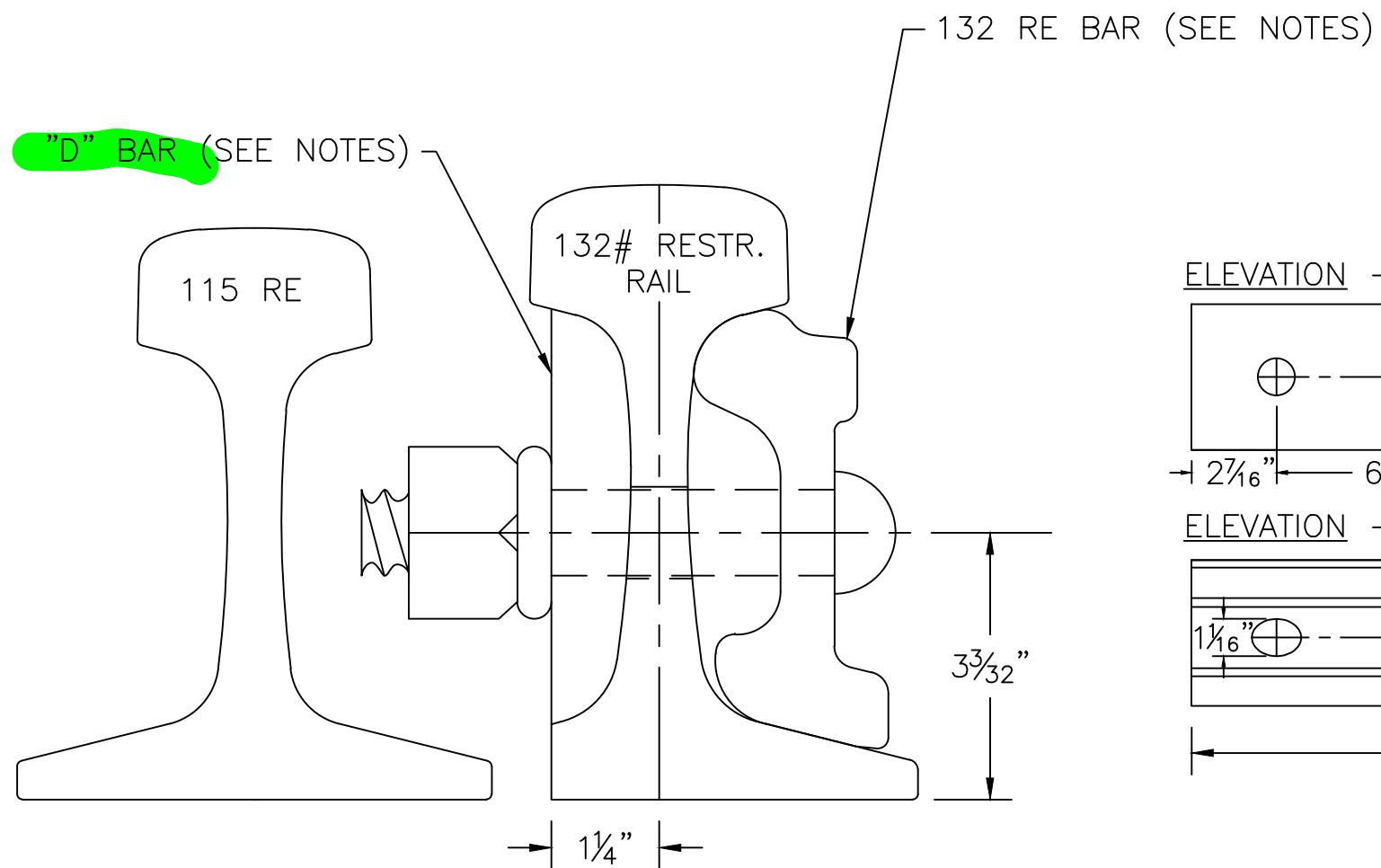
SHIPMENT

All materials are to be shipped via motor freight to the following location during the hours (8:00 AM to 1:00 PM Monday through Friday), Conformation of delivery time and date must be given at least twenty-four (24) hours in advance during the same business hours. Shipment shall be directed to the following individual:

Supervisor of Yard Services
21 Arlington Avenue
Charlestown, Massachusetts 02129
(617)222-5290

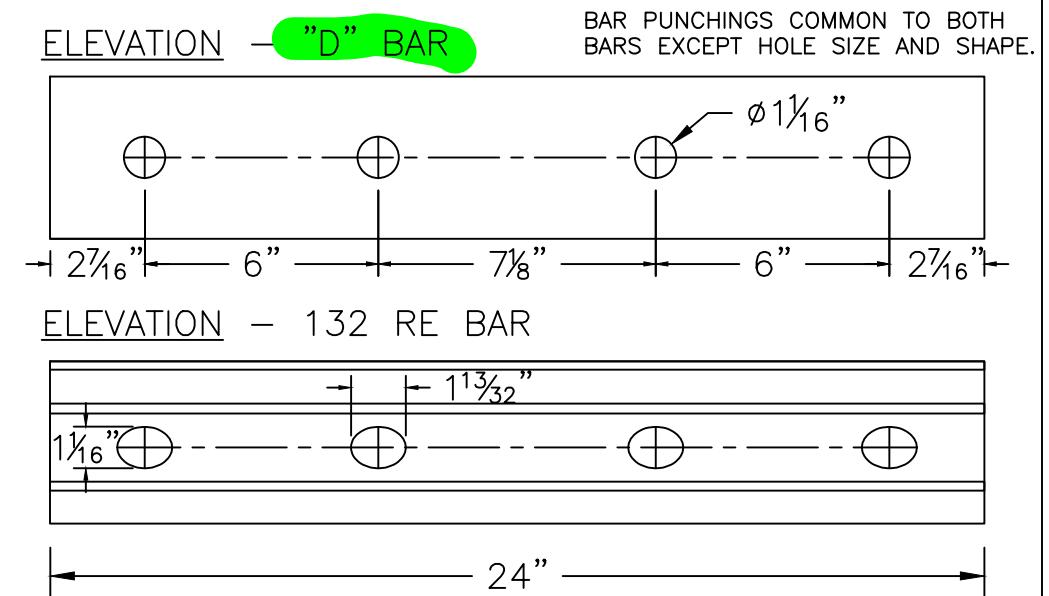
DELIVERY

To be accepted, the rails delivered to the MBTA shall conform to these Specifications in all respects. Material is at the supplier's risk until accepted at the specified delivery site by an authorized representative of the MBTA. Material rejected for non-compliance with these Specifications will be returned to the supplier wholly at the supplier's expense.



NOTES:

- 1) BAR FOR OUTSIDE OF ASSEMBLY TO BE STANDARD, HEADFREE 24" LONG WITH PUNCHING FOR FOUR 1" OVAL NECK, HEAT TREATED CARBON STEEL TRACK BOLTS.
- 2) BAR ON 115 RE SIDE OF ASSEMBLY TO BE MACHINED STEEL WITH TRUE FISHING FOR 132 RE RAIL. BAR TO BE 1" THICK X 24" LONG WITH FOUR $1\frac{1}{16}$ " CIRCULAR HOLES
- 3) BOTH BARS TO BE IN ACCORDANCE WITH CURRENT AREMA "SPECIFICATIONS FOR QUENCHED CARBON STEEL JOINT BARS" AS MODIFIED HEREIN.



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY	M.O.W. DIVISION	DRG. NO. 330
APR. 18, 2013	©	ISSUE DATE ISSUE NO.

132 RE RESTRAINING RAIL
JOINT DETAILS

**MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
MAINTENANCE OF WAY DIVISION
TRACK MATERIAL SPECIFICATION**

115RE, 24", 4 Hole, Shaved Joint Bars

MATERIALS

115 RE, 4 Hole, Quenched Carbon Steel Joint Bars shall conform to the following specifications in the A.R.E.A. Manual for Railway Engineering Volume 1 in the rail section. Except as Modified in Drawing MBTA 321

1) Chapter 4 Part 3 :

Joint Bar Assembly for 115 RE and 119 RE Rail

- Section 3.1 General Characteristics of a Rail joint
- Section 3.2 Joint Bars and Assemblies,
Figure 4-3-1
- Section 3.3 Rail Drillings, Bar Punchings and Bolts,
Table 4-3-1 and Figure 4-3-8
- Section 3.4 Specifications for quenched Carbon-Steel Joint Bars, Microalloyed Joint Bars, and Forged Compromised Joint Bars

4.3.1 – 4.3.14

Joint bars shall be in accordance with the latest edition of the AREMA Portfolio of Trackwork plans for 4 hole joint bars and modified as listed below. Length of bar shall be 24" and hole punching will be following:

A pair of joint bars shall consist of 2 bars, the shaved bar, as shown on MBTA drawing 321, shall have all round holes, and the second bar shall have all oval holes.

INSPECTION

Inspection shall be in accordance with the inspection procedures outlined in the AREMA Manual.

SHIPMENT

Joint bars shall be stacked neatly on pallets and securely banded with a sufficient number of 2" x 0.05" heavy duty steel bands to prevent the bars from shifting on the pallet while in shipment or being handled upon receipt.

DELIVERY

Material shall be delivered via road to the MBTA Charlestown Rail shop, 21 Arlington Ave, Charlestown, Massachusetts.

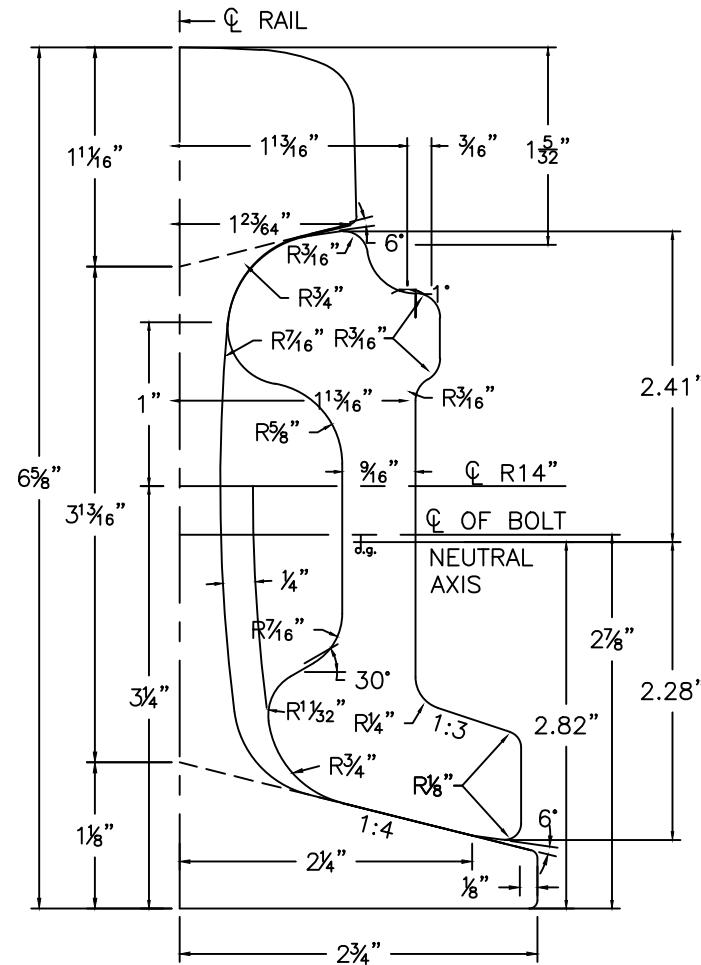
Notification of delivery is to be made two (2) business days in advance to rail shop supervisor, (617) 222-5290.

Inspection and testing shall be in conformance with the inspection procedures outlined in the current AREMA Manual, Chapter 4, Part 2.

Prior to shipment, the manufacturer or supplier shall submit certified inspection and test reports as required.

Joints shall be wired into matched pairs, palletized and strapped for shipment.

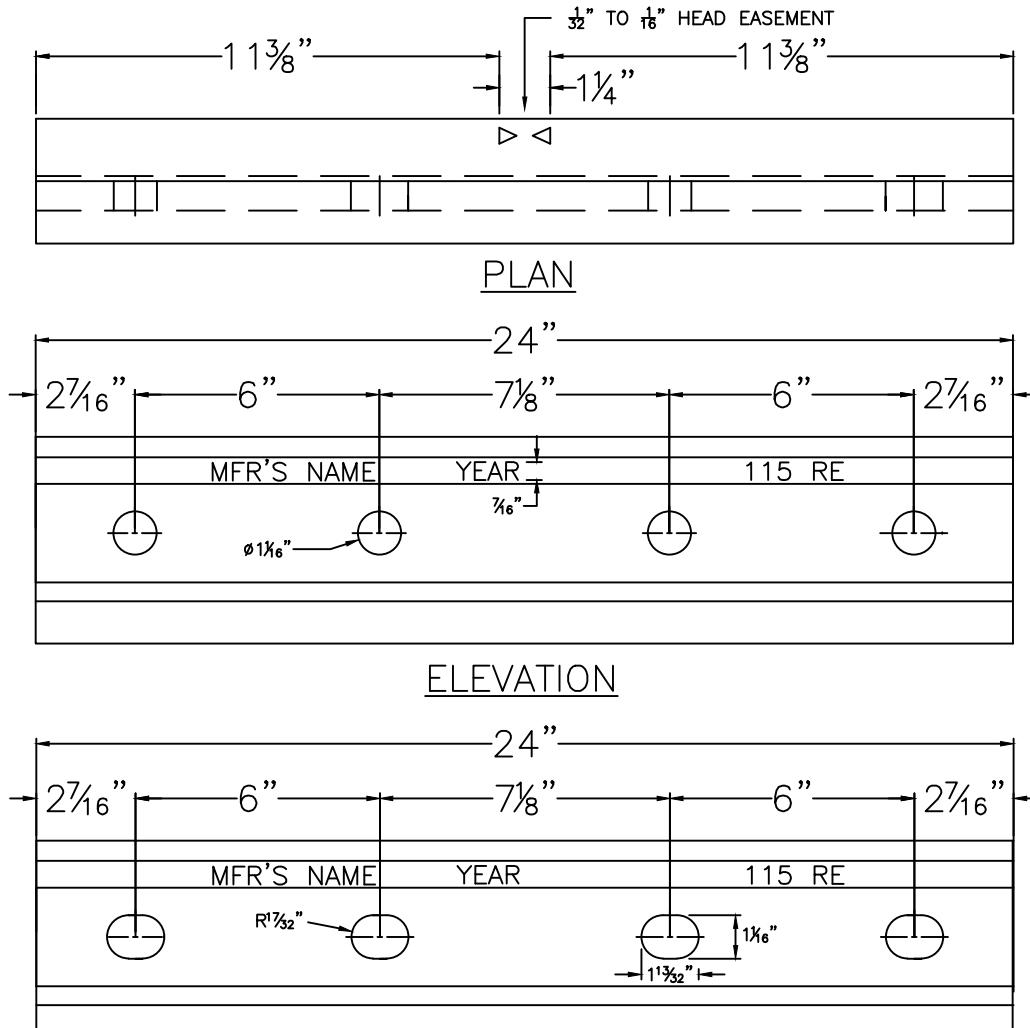
To be accepted, all material specified herein shall conform to these Specifications in every respect. Material is at the supplier's risk until accepted at the specified delivery site by an authorized representative of the MBTA. Material rejected for non-compliance with these Specifications will be returned to the supplier wholly at the supplier's expense.



SECTION

NOTES

- 1) JOINT BARS TO BE IN ACCORDANCE WITH CURRENT AREMA "SPECIFICATIONS FOR QUENCHED CARBON STEEL JOINT BARS".
- 2) JOINT BARS TO BE SHORT TOE AND HEADFREE DESIGN. BARS SHOWN ARE FOR USE WITH 1" ELLIPTICAL NECK TRACK BOLTS.



ELEVATION



MASSACHUSETTS
BAY
TRANSPORTATION
AUTHORITY

**M.O.W.
DIVISION**

DRG.
NO. 321
MAR. 20, 2017 (0)
ISSUE DATE ISSUE NO.

JOINT BAR DETAILS FOR 115 RE SECTION RAIL

**MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
MAINTENANCE OF WAY DIVISION
TRACK MATERIAL SPECIFICATION**

115RE, 36", 6 Hole, Joint Bars

MATERIALS

115 RE, 6 Hole or 4 Hole Quenched Carbon Steel Joint Bars shall conform to the MBTA, MOW Drawing number 320 for 6 hole joint bar and ~~number 321 for 4 hole joint~~ bar and also conform to the following specifications in the A.R.E.A. Manual for Railway Engineering Volume 1 in the rail section.

1) Chapter 4 Part 3 :

Joint Bar Assembly for 115 RE and 119 RE Rail

- Section 3.1 General Characteristics of a Rail joint
- Section 3.2 Joint Bars and Assemblies,
Figure 4-3-1
- Section 3.3 Rail Drillings, Bar Punchings and Bolts,
Table 4-3-1 and Figure 4-3-8
- Section 3.4 Specifications for quenched Carbon-Steel Joint Bars, Microalloyed Joint Bars, and Forged Compromised Joint Bars
Section 4.3.1 – 4.3.14

INSPECTION

Inspection shall be in accordance with the inspection procedures outlined in the AREMA Manual.

SHIPMENT

Joint bars shall be stacked neatly on pallets and securely banded with a sufficient number of 2" x 0.05" heavy duty steel bands to prevent the bars from shifting on the pallet while in shipment or being handled upon receipt.

DELIVERY

Material shall be delivered via rail or road to the MBTA

Charlestown Rail shop
21 Arlington Ave.
Charlestown, Massachusetts 02129
(617) 222-5290.

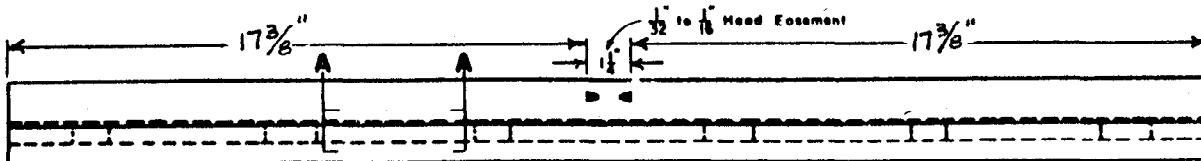
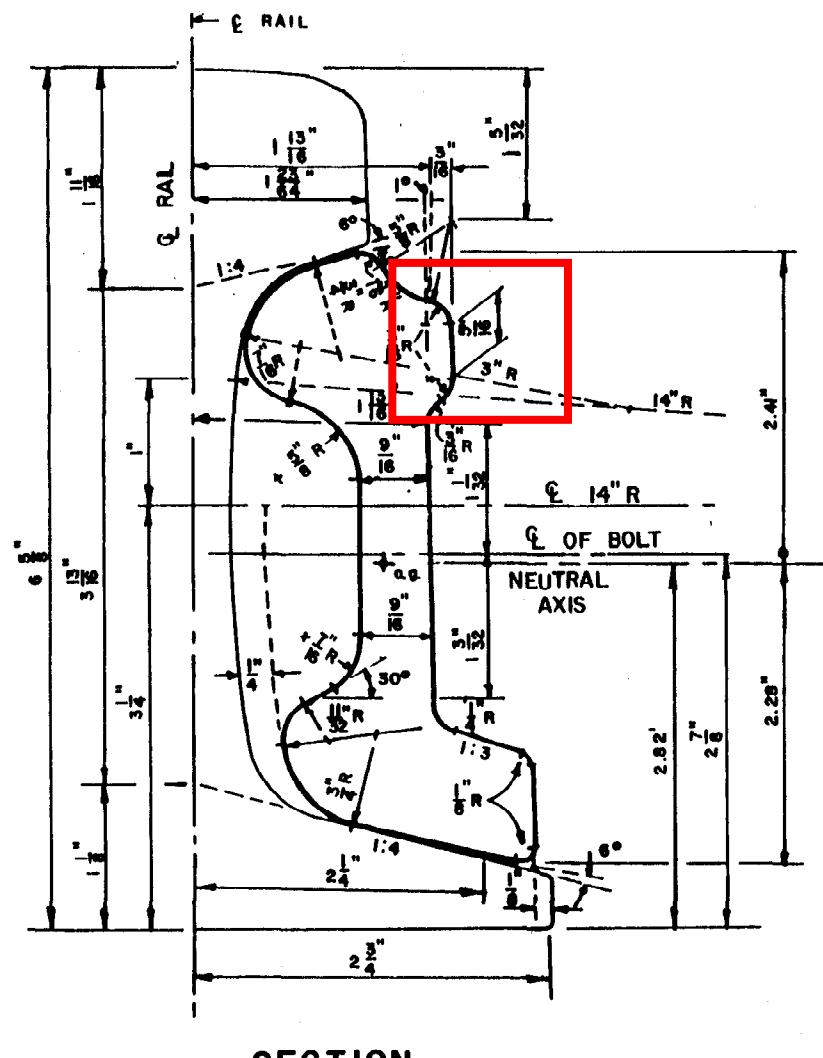
Notification of delivery is to be made two (2) business days in advance to Rail Shop manager, (617) 222-5290.

Inspection and testing shall be in conformance with the inspection procedures outlined in the current AREMA Manual, Chapter 4, Part 2.

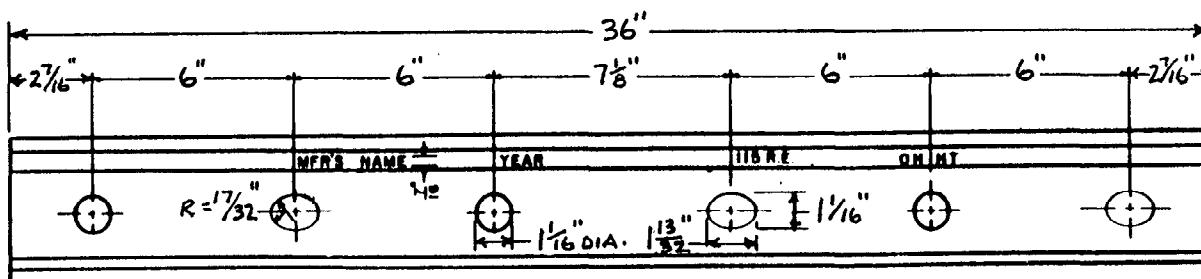
Prior to shipment, the manufacturer or supplier shall submit certified inspection and test reports as required.

Joints shall be wired into matched pairs, palletized and strapped for shipment.

To be accepted, all material specified herein shall conform to these Specifications in every respect. Material is at the supplier's risk until accepted at the specified delivery site by an authorized representative of the MBTA. Material rejected for non-compliance with these Specifications will be returned to the supplier wholly at the supplier's expense.



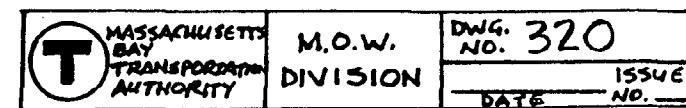
PLAN



ELEVATION

NOTES:

- ① Joint Bars to be in accordance with current AREMA "Specifications for Quenched Carbon Steel Joint Bars".
- ② Joint Bars to be Short Toe and Headfree design. Bars shown are for use with 1" elliptical neck track bolts.



JOINT BAR DETAILS
for 115 RE SECTION RAIL

Mgr: Track Engineering

Director-M.O.W.